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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,464	07/27/2001	Vivek Kashyap	BEA920010014US1	1080

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EXAMINER

MASKULINSKI, MICHAEL C

ART UNIT PAPER NUMBER

2113

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/917,464

Applicant(s)

KASHYAP, VIVEK

Examiner

Michael C Maskulinski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/15/04</u> . | 6) <input type="checkbox"/> Other: _____ |

Non-Final Office Action

Claim Rejections - 35 USC § 101

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claim 20 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. A computer-readable medium that is a modulated carrier signal does not fall within any of the four statutory classes of subject matter and is neither concrete nor tangibly embodied. Cancellation of this claim is required.
3. In view of the recent amendments, the rejection of claim 16 under 35 U.S.C. 101 has been withdrawn.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Antes et al., US 2003/0018813 A1, and further in view of TCP/IP Illustrated Volume 1 The Protocols, by W. Richard Stevens.

Referring to claims 1 and 9:

a. In paragraph 0004, Antes et al. disclose using a network for communications. Further, in Figure 9, Antes et al. disclose the use of the TCP/IP protocol. However, Antes et al. don't explicitly disclose using multicasting in the network. On page 175, Stevens discloses multicasting in a TCP/IP network. It would have been obvious to one of ordinary skill at the time of the invention to include the multicasting of Stevens into the system of Antes et al. A person of ordinary skill in the art would have been motivated to make the modification because multicasting provides delivery to multiple destinations and solicitation of servers by clients (see Stevens: page 175). Further, multicasting provides a transmission of data to multiple receivers using the least network bandwidth. It is also well known that the number of addresses assigned to multicasting addresses is limited, therefore it would be important to reuse an IP address during failover rather than assign the new node a new IP address. In paragraph 0009, Antes et al. disclose that their invention attempts to solve the problem of not being able to reuse IP addresses.

b. In paragraph 0074, Antes et al. disclose that the distributing processor may distribute connections to a single IP address to one of the servers such that the client may communicate with any of the servers utilizing the single IP address as a destination address (assigning the multicast address to the first node, such that communication to the multicast address is directed to the first node through the network, and, mapping a multicast port on a switch of the network to a port

on the first node, such that communication to the multicast address is directed to the port on the first node from the multicast port on the switch).

c. In paragraphs 0093 and 0094, Antes et al. disclose that when a failure is detected, the backup processor obtains the security information for communications distributed by the primary distributing processor from the common storage. Further, communications associated with communications on the network utilizing a security protocol will be sent to the backup distributing processor (upon failure of the first node, if the joining assigned the multicast address to the first node, joining by a second node of the network to the multicast group, such that the multicast address is assigned to the second node, and the communication to the multicast address is handled by the second node, and, if the joining mapped the multicast port on the switch to the port on the first node, remapping the multicast port on the switch to a port on the second node, such that the communication to the multicast address is directed to the port on the second node).

Referring to claim 2, in paragraphs 0093 and 0094, Antes et al. disclose that when a failure is detected, the backup processor obtains the security information for communications distributed by the primary distributing processor from the common storage. Further, communications associated with communications on the network utilizing a security protocol will be sent to the backup distributing processor (if the joining assigned the multicast address to the first node, prior to the second node of the network

joining the multicast group, the first node leaving the multicast group by the second node sending a leave request to a subnet manager (SM) on behalf of the first node).

Referring to claims 3, 12, in paragraph 0096, Antes et al. disclose that when a distributing processor has recovered from a failure, the recovered distributing processor notifies the backup distributing processor that it has recovered. The recovering distributed processor then obtains the security information from the common storage. The obtained security information is used to establish security relationships to the recovering distributing processor over the network (if the joining assigned the multicast address to the first node, upon failback by the first node, assigning the multicast address to the first node, such that communication to the multicast address is again handled by the first node).

Referring to claim 4, in paragraphs 0093 and 0094, Antes et al. disclose that when a failure is detected, the backup processor obtains the security information for communications distributed by the primary distributing processor from the common storage. Further, the backup distributing processor may also notify other data processing systems in the cluster that it has taken over as the distributing processor so that communications associated with communications on the network utilizing a security protocol will be sent to the backup distributing processor (if the joining mapped the multicast port on the switch to the port on the first node, the multicast port on the switch is remapped to the port on the second node by the second node requesting to remap the multicast port on the switch to the second node to a subnet manager (SM), the SM remapping the multicast port on the switch to the port on the second node).

Referring to claim 5, in paragraph 0096, Antes et al. disclose that when a distributing processor has recovered from a failure, the recovered distributing processor notifies the backup distributing processor that it has recovered. The recovering distributed processor then obtains the security information from the common storage. The obtained security information is used to establish security relationships to the recovering distributing processor over the network (if the joining mapped the multicast port on the switch to the port on the first node, upon failback by the first node, remapping the multicast port on the switch to the port on the first node, such that communication to the multicast address is again directed to the port on the first node).

Referring to claim 6, in paragraph 0096, Antes et al. disclose that when a distributing processor has recovered from a failure, the recovered distributing processor notifies the backup distributing processor that it has recovered. The recovering distributed processor then obtains the security information from the common storage. The obtained security information is used to establish security relationships to the recovering distributing processor over the network. Further, in paragraph 0098, Antes et al. disclose that the failure and recovery scenario may also be used when a new distributing processor is incorporated into the cluster of data processing systems (wherein the joining by the first node of the network to the multicast group comprises the first node requesting to join the multicast group to a subnet manager (SM), the SM assigning the multicast address to the first node and mapping the multicast port on the switch to the port on the first node).

Referring to claim 7, in paragraph 0074, Antes et al. disclose that the distributing processor may also function as a server and, thus, be the ultimate endpoint of communications with the client (wherein after the joining by the first node to the multicast group, the multicast group has only a single member, the first node).

Referring to claims 8, 10, in paragraph 0092, Antes et al. disclose that the failure is detected by the backup distributing processor (upon failure of the first node, the second node initially detecting the failure of the first node).

Referring to claim 11, in paragraph 0092, Antes et al. disclose that the failure is detected by the backup distributing processor (wherein the management component detects the failure of the first node).

Referring to claim 13, in paragraph 0005, Antes et al. disclose adapter devices in a node for connecting to a network (wherein each of the first node and the second node comprises at least one of: a host and a channel adapter (CA)).

Referring to claim 14, in paragraph 0005, Antes et al. disclose adapter devices in a node for connecting to a network (wherein each of the first node and the second node comprises a channel adapter (CA) on a same host).

Referring to claim 15, in paragraphs 0093 and 0094, Antes et al. disclose that when a failure is detected, the backup processor obtains the security information for communications distributed by the primary distributing processor from the common storage. Further, the backup distributing processor may also notify other data processing systems in the cluster that it has taken over as the distributing processor so that communications associated with communications on the network utilizing a security

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protocol will be sent to the backup distributing processor (wherein the network comprises a subnet having a subnet manager (SM), where the management component is the SM).

Referring to claim 16:

- a. In paragraph 0070, Antes et al. disclose a computer-readable medium.
- b. In paragraphs 0093 and 0094, Antes et al. disclose that when a failure is detected, the backup processor obtains the security information for communications distributed by the primary distributing processor from the common storage. Further, communications associated with communications on the network utilizing a security protocol will be sent to the backup distributing processor (means in the medium for performing one of two actions selected from the group essentially consisting of: assigning a multicast address of a multicast group that was initially assigned to a first node of a network that has failed to a second node of the network; and, remapping a multicast port on a switch of the network that was initially mapped to a port on the first node that has failed to a port on the second node).

Referring to claim 17, in paragraphs 0093 and 0094, Antes et al. disclose that when a failure is detected, the backup processor obtains the security information for communications distributed by the primary distributing processor from the common storage. Further, communications associated with communications on the network utilizing a security protocol will be sent to the backup distributing processor. Further, in paragraph 0098, Antes et al. disclose using the remapping to incorporate a new

distributing processor into the cluster of data processing systems (wherein the means assigns the multicast address of the multicast group that was initially assigned to the first node of the network that has failed to the second node of the network in response to receiving a request from the second node to join the multicast group).

Referring to claim 18, in paragraphs 0093 and 0094, Antes et al. disclose that when a failure is detected, the backup processor obtains the security information for communications distributed by the primary distributing processor from the common storage. Further, communications associated with communications on the network utilizing a security protocol will be sent to the backup distributing processor. Further, in paragraph 0098, Antes et al. disclose using the remapping to incorporate a new distributing processor into the cluster of data processing systems (wherein the means remaps the multicast port on the switch on the network that was initially mapped to the port on the first node to the port on the second node in response to receiving a remapping request from the second node).

Referring to claims 19 and 20, in paragraph 0070, Antes et al. teach a recordable data storage medium and a modulated carrier signal.

Response to Arguments

6. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,078,957 Adelman et al.

U.S. Patent 6,782,422 B1 Bahl et al.

US 2001/0047407 A1 Moore et al.

US 2002/0156612 A1 Schulter et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C Maskulinski whose telephone number is (571) 272-3649. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MM

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